
LAKE SHELBYVILLE MASTER PLAN

KASKASKIA RIVER WATERSHED SHELBYVILLE ILLINOIS

CHAPTER 6 – SPECIAL TOPICS/ISSUES/CONSIDERATIONS

6.1. NON-FEDERAL HYDROPOWER DEVELOPMENT

Shelbyville Hydro, LLC, a wholly-owned subsidiary of Symbiotics, LLC, has proposed the development of a hydropower facility in the spillway basin area. The basic design entails running a pipe from the west sluice gate through the stilling basin to a turbine house downstream of the stilling basin. The proposed hydropower facility will be operated as a run-of-the-river type operation. The annual average energy production is estimated to be 20.3 gigawatt-hours. Outflows will not be modified for hydropower purposes. The facility will only utilize the outflows that would normally occur.

References for this program include ER 1110-2-1454, 15 July 1983, Corps Responsibilities for Non-Federal Hydroelectric Power Development under the Federal Power Act and EM 1110-2-3001, 30 April 1995, Planning and Design of Hydroelectric Power Plant Structures.

The spillway area between the main dam and Illinois Highway 16 Bridge is a popular fishing spot. Some of this area will be lost. A safe distance downstream of the turbine will need to be determined, marked with signs and a safety cable across the river to restrict the area from boats getting too close. Warning devices that power generation is about to begin will need to be installed. A security barrier will need to be installed to prevent access to the facility from the land. A mitigation plan will be coordinated with the company to compensate for facility construction and adverse effects to recreation.

Coordination with all appropriate agencies including US Army Corps of Engineers, Federal Energy Regulatory Commission, and IDNR is required before the project progresses.

6.2. SECTION 1135 PROJECT

Section 1135 of the Water Resource Development Act (WRDA) of 1986 allowed modification of completed projects to restore environmental benefits. The 754.5-acre restoration project area is situated in Moultrie County at the northern end of Lake Shelbyville on the Kaskaskia and West Okaw Rivers in the West Okaw and Kaskaskia Wildlife Management Areas.

The project consists of a series of low levees forming 16 management compartments, a ditch drainage system, water control structures, additional watering and dewatering capability, overflow weirs, rocked roadways to pump sites, levee revetment on all critical areas, fish nursery areas, and natural tree regeneration. The start date for construction is dependent on funding, and has been shelved until funding can be secured by both IDNR and USACE.

The total estimated cost of constructing the proposed modification is \$6.1 million. The State of Illinois will provide the 25% non-federal cost-share for the project's planning, design, and construction. The projects O & M (estimated at \$32,665 per year, with no additional FTE requirement) will be the responsibility of the State of Illinois.

The modification would restore 754.5-acres of habitat and improve the water level management capability to a maximum extent. The complex is integral to the long-term restoration of wetlands at the Lake Shelbyville Project. The water control system and levees, coupled with vegetation management will allow for the restoration of more natural hydric and vegetative conditions.

The draft Ecosystem Restoration Report with Environmental Assessment and Finding of No Significant Impact was completed and distributed for agency and public comment during September-October 2003. The final report is currently being reviewed by the Corps' Mississippi Valley Division.

6.3. PARTNERING

The Corps has control and oversight of stewardship activities on public lands and waters at Lake Shelbyville. Responsibility for recreation management is granted to the IDNR at Wolf Creek and Eagle Creek State Parks. The IDNR also manages the West Okaw and Kaskaskia Wildlife Management Areas.

Increasingly, competition for the use of these lands and waters and their natural resources can create conflicts and concerns among stakeholders. The need to coordinate a cooperative approach to protect and sustain these resources is compelling. Many opportunities exist to increase the effectiveness of federal programs through collaboration among agencies and to facilitate the process of partnering between government and non-government organizations.

To sustain healthy and productive public lands and waters with the most efficient approach requires that individuals and organizations recognize their unique ability to contribute to commonly held goals. The key to progress is building on the strengths of each sector, achieving goals collectively that could not be reasonably achieved individually. Partnering opportunities exist and can promote the leveraging of limited financial and human resources. Partnering aids the identification of innovative approaches to deliver justified levels of service, defuses polarization among interest

groups, and leads to a common understanding and appreciation of individual roles, priorities and responsibilities.

To the extent practicable, this Master Plan and a proactive approach to partnering will position the Lake Shelbyville Project to aggressively leverage project financial and human resources in order to identify and satisfy customer expectations, protect and sustain natural and cultural resources and recreational infrastructure, and sustain Corps management efforts and outputs at a justified level of service.

The Lake Shelbyville Project continues to seek new partnerships and strengthen existing ones to accomplish project initiatives. There are several implementation methods or authorities currently available for partnering at Lake Shelbyville:

Traditional Cost Sharing. Funding for cost sharing may well become more difficult to secure than in the past. In addition to providing at least 50 percent of the development costs of a proposal up front, the cooperating local governmental entity must also agree to operate, maintain, and provide major replacements for the new development.

Development Solely by State or Local Interests under an Outgrant. As in the past, state and local government entities with all or part of a project in their jurisdiction, may obtain use, under a lease or license, of an area for approved recreational development. In such cases, all development costs are the sole responsibility of the local sponsor and operation, maintenance, and major replacements costs must also be borne by them also.

Development by Concessionaire. Another development and funding method that could be used involves the implementation of some of the plans proposed in this Master Plan by a concessionaire. Only activities for which there is a viable commercial market are generally eligible. For developments undertaken in this manner, the concessionaire also provides operation, maintenance, and major replacements.

Challenge Partnership Program. Section 225 of the Water Resources Development Act of 1992 authorized the Challenge Cost-Sharing Program (since renamed Challenge Partnership Program), and gave the Secretary of the Army authority to enter into cooperative agreements with non-Federal public and private entities to provide for operation and/or management and development of recreation facilities and natural resources at water resource development projects where such facilities are being maintained as full Federal expense.

Contributions Program. Contributions that provide for operation and management of recreation facilities and protection and restoration of natural resources at civil works water resource projects can be accepted and used, as provided by PL 102-580, Water Resources Development Act, 1992 (106 Stat. 4838, 33 United States

Code (USC) 2328, Section 203). Contributions, which are within current authorities, consistent with the Corps mission, and are for work items contained in an approved annual or five-year Operational Management Plan may be accepted. Donations are considered contributions.

Memorandum of Agreement (MOA) and Memorandum of Understanding (MOU). MOA and MOU are written agreements between the Corps of Engineers and another agency that provides for the transfer or performance of a technical mission or function. When the MOA or MOU doesn't address specific projects or funding, a Support Agreement will generally be prepared to supplement the MOA or MOU.

Volunteer Program. The Corps of Engineers may accept the services of volunteers and provide for their incidental expenses to carry out any activity of the Corps of Engineers except policy making or law/regulatory enforcement as authorized under PL 98-63. A volunteer is not an employee of the Corps of Engineers except for the purposes of Chapter 171 of Title 28 of the USC, relating to tort claims, and Chapter 81 of Title 5 of the USC, relating to compensation for work injuries. Voluntary service is official government business, having some value to the Corps of Engineers, conducted by volunteers under the direction of a paid Corps of Engineers employee. Volunteers provide diverse and significant contributions to many of the Lake Shelbyville Environmental Stewardship, Natural Resources, Recreation, and Interpretive Services programs. These contributions are worth thousands of dollars annually.

Cooperating Association. Cooperating associations are used to accomplish such broad goals as natural resource management, interpretive services, and visitor service activities on civil works water resource projects, fee-owned lands, and other areas for which the Corps of Engineers has administrative and management responsibilities. Associations aid the Corps of Engineers through a variety of activities.

Continuing Authorities Program (CAP). The Corps of Engineers undertakes studies of water and related resources problems and opportunities as directed or authorized by Congress. These Congressional authorizations are contained in public laws, and in resolutions of either the House Public Works and Transportation Committee or the Senate Environment and Public Works Committee. Study authorizations can be unique, study-specific authorities, or they can be standing program authorities, usually called continuing authorities, under which specific studies and projects may be done. These studies are done at the discretion of the Secretary of the Army of the Chief of Engineers and focus on whether a federal project responding to the problems and opportunities of concern should be recommended.

6.4. COOPERATING ASSOCIATIONS

Cooperating associations are used to accomplish such broad goals as natural resource management, interpretative services, and visitor service activities on civil works water resource projects, fee-owned lands, and other areas for which the Corps of Engineers has administrative and management responsibilities. Associations aid the Corps of Engineers through a variety of activities, which may include the following:

- Supporting activities such as:
 - Special events
 - Interpretive, educational, or scientific activities
 - Exhibits and programs
 - Presentations and demonstrations that further public understanding and appreciation of the mission of the Corps of Engineers or a particular water resource development project.
- Supporting natural resource management through conservation and educational activities and special events; and also by providing scientific, logistical, maintenance, and other support.
- Acquiring display materials, historical objects, equipment, supplies, materials, goods or other items, or services appropriate for management, operation, interpretive, educational, and visitor service functions.
- Providing services to visitors through the sale, production, publication, and/or distribution of appropriate interpretive and educational items directly related to the recreation, scientific, interpretive and educational goals and mission of a project, a group of projects and/or the Corps of Engineers as a whole.
- Acting as a principal distribution medium for those educational and scientific publications of the government and trade that relate to the Corps of Engineers and/or project mission, mandate or management efforts and provide the public with inexpensive and technically accurate materials.

Lake Volunteers Association

In 2001, the Kaskia-Kaw Rivers Conservancy entered into a Cooperative Agreement with the Corps of Engineers. The group officially changed their name in 2013 to Lake Volunteers Association (LVA) and the Corps renewed the cooperative agreement with LVA 22 July 2013. The Corps of Engineers authorizes the Association to provide, and the Association agrees to provide interpretive and educational services and/or research and scientific services to the public. As part of the agreement, the Association may operate a sales area on a continuous or intermittent basis. Sales areas are located in the Lake Shelbyville Visitor Center and Carlyle Lake Visitor Center.

LVA manages the sales area in the Lake Shelbyville Visitor Center and assists in coordinating and presenting special events at Lake Shelbyville and surrounding communities that help build community and public relations. This agency also has a Real Estate License that allows them to provide vending machines within the recreation areas at Lake Shelbyville.

6.5. LOCAL DEVELOPMENT ON ADJACENT LANDS

The land acquisition policy and physical characteristics at Lake Shelbyville prevent private land ownership or development near or adjacent to the shores of the lake. However, the recreational attractiveness of the project has resulted in subdivision platting in the vicinity of the lake. Several of these subdivisions are located on land formerly used as agricultural fields. Problems could occur as urban sprawl continues into the rural areas around Lake Shelbyville. In some cases areas that are not platted subdivisions are still experiencing growth with landowners selling small acreages adjacent to Corps property. New owners are building homes close to government boundary lines, potentially increasing conflict with public lands users, particularly hunters. To protect the Lake Shelbyville watershed lands and waters, additional zoning regulations in both Shelby and Moultrie counties may need to occur.

6.6. EFFECTS OF FLOOD CONTROL

As indicated in the 1974 Lake Shelbyville Environmental Impact Statement, the operation of Lake Shelbyville is intended to achieve the greatest possible benefit for each project purpose over the long run. Compromises are an inherent part of the operations and some adverse impacts are inevitable.

Downstream – The degree of effects on the downstream landowners depends on the severity of the storm causing flooding, and the elevation to which the lake is raised above the top of the joint-use pool. When the level of the lake is below elevation 610 feet NGVD and a storm producing heavy runoff both above and below the dam occurs, the releases from the reservoir will be low until the tributaries and the Kaskaskia River downstream of Shelbyville Dam have crested and within-bank flows can be maintained. An adverse effect of this plan of regulation is that the duration of high flow is extended considerably. The prolonged high river stage raises the ground water level to a point where downstream landowners' fields, though not flooded by surface flow, are completely saturated and unworkable. When the lake rises above elevation 610 feet NGVD, the plan is to release between 1,800 and 4,500 cfs from the lake. The release will flood the lands downstream of the dam and could occur once every five years for a period of three weeks. In addition, it could adversely affect the planting, growing, and harvesting of crops.

Upstream - As the level of the lake rises, portions of land used for recreation are inundated, thereby restricting their use. The degree and length of restriction depends upon the severity of the flood. A flood of the magnitude that can be expected once every five years will have some detrimental effects upon recreation at the lake. All of the

recreation areas will remain open; however, some swimming, picnic, camping, and boat launching facilities will be inundated. Side effects of the area being inundated include the destruction of grass turf, loss of trees, accumulation of driftwood, reduction of visitation, and loss of marina income. The soils are highly erodible and fluctuation of the water level plus wave action from wind and boats cause an eroded condition along the shoreline. Erosion also produces excessive turbidity along the water's edge. Vegetation destruction because of flooding increases possible erosion due to storm water runoff. Floods in excess of a five-year frequency cause proportionately greater damages. The fish population could be adversely affected if spawning coincides with receding high water.

Moultrie County Roads and Bridges Periodically Inundated Due to High Lake Levels - The Corps of Engineers is working with the township road commissioners in Moultrie County to improve roads and bridges that become inundated during high lake levels to ensure that some areas remain accessible to the public. These include the roads in Moultrie County where the following bridges are located: Joe Pound Bridge (1275N, 1350E), Butts Bridge (1575N, 600E), and Gary Melvin Kaskaskia River Bridge (1125N, 1675E). Locations of these bridges are shown on Plates 1, 32 and 33.

6.7. LAKE FLUCTUATION IMPACTS ON FACILITIES

Lake fluctuation affects the recreational use of swimming beaches, boat launching ramps, recreation facilities, and marinas as well as impacting shoreline erosion and fish spawning environmentally.

Swimming beaches are developed so that they are functional with a fluctuating water level of plus or minus five feet. Water levels between five and ten feet above the normal summer pool cover the developed sand beach and reduce swimming activities (about 15 percent of the time). The swimming beach is closed once water levels are ten feet above normal summer pool (about 6 percent of the time). These higher water levels are generally occurring in May, June and July when visitation is the highest. The Corps has partnered with IDNR to provide a buoy system at Wolf Creek State Park that allows the beach there to stay open at higher water levels.

High water boat ramps become operational when water covers the main boat ramps. There are 10 high water ramps located around Lake Shelbyville. They are located at Dam West, Lithia Springs, Opossum Creek, Coon Creek, Lone Point, Bo Wood, and Wilborn Creek Recreation Areas, Wolf and Eagle Creek State Parks, and Findlay Marina. These ramps allow boaters uninterrupted access to the water. However, the high water boat launching ramps are designed as two lane ramps and become congested within the ramp parking lots and at the ramps themselves especially on weekends. To reduce this congestion existing ramps should be widened where it is feasible. For marina activity to continue temporary walkways have to be put in place and boat shuttles have to be provided so that the visitors can access the facility.

Management practices undertaken to reduce the effect of flooding on recreation activities include the planting of water-tolerant trees and shrub species to preserve vegetative cover on low-lying recreation land, raising low portions of access roads to assure access to campgrounds and picnic areas during times of moderate flooding, riprap protection of key recreation areas which are subject to erosion at high pool stages, protecting lift stations from flooding so that toilet facilities can be used during moderate flooding, and drawing the pool elevation down to winter pool each fall so that additional flood storage capacity is achieved. The drawdown allows flood waters to be contained within the joint-use pool first, utilizing the flood control pool only as necessary. The drawdown has the adverse effect of exposing mud flats in shallow water, thereby restricting access to portions of the lake. Since recreation activities are at a low intensity during the programmed drawdown, there is little adverse effect on recreation. In drought years, however, seasonal pool cannot be reached by the first of May. The low water level does affect recreation as beaches are not fully usable, the bare strip around the lake is unsightly, and fewer boaters are on the lake.

Steps taken to counteract the effects of low water levels include the construction of boat channels from the launching ramps to deep water and excavation of underwater portions of launching ramps to accommodate boats during a moderate drawdown.

The Corps of Engineers will continue to work with the Illinois Department of Natural Resources during the spring to provide conditions suitable for a successful fish spawn. The two agencies will work together to create and place artificial fish habitat structures in Lake Shelbyville. Where possible, the lake level will be maintained at a constant or slowly rising elevation to assist in productive fish spawning, nesting, and rearing activities.

To reduce the effects of flooding the breakwaters at Findlay Marina and Lithia Springs Marina have been raised to 613 feet above sea level. The IDNR has plans to renovate the breakwater at Eagle Creek to reduce wave action and minimize shoreline erosion.

6.8. ACCESS

6.8.1. Access to Public Lands

There are several locations around the lake that are or may become inaccessible in the future. It is in the government's best interest to acquire easements to access these lands. The general locations of these proposed access easements are shown on Plate 1. Technical details, costs, and descriptive information will be provided in a supplement to the Real Estate Design Memorandum.

Ten parcels of project land, totaling approximately 1,550 acres, are inaccessible because they are not contiguous to any road, and can only be reached by crossing private land. Access to these lands by project management personnel and/or their agents is essential for the following reasons:

- Resource management through development of food plots, succession control, timber stand improvement, reforestation, archaeological survey, etc.
- Fire protection of project land and protection of adjacent private property from fires originating on public land.
- Cleanup and debris removal.
- Boundary and surveillance.
- Protection of the resource through enforcement of Title 36.

The proposed easements would be for use by the Government, its officers, agents, employees, and contractors, reserving to the landowners the right to cross over or under the right of way.

It is anticipated that a portion of the maintenance complex service road in the Dam East Recreation Area, if not protected, may wash out due to shoreline erosion. This will not only affect access to the maintenance complex, but also access to one of the trilateration towers used to monitor the dam. At that time an easement or purchase of private property would be necessary.

6.8.2. Office of Federal Lands Highway

The Federal Highway Administration (FHWA) and its predecessor agencies have been directly engaged in providing access to and within Federal facilities since 1905. The Agricultural Appropriation Acts of 1912 and 1913 provided funds that could be expended on construction of roads and trails serving the National Forest, and for the first time offered a sustained source of revenue for road improvement purposes in the public domain. The program has changed over the years with new programs and funding available for transportation planning, research, engineering and construction of highways, roads and parkways, or of transit facilities within Federal public lands. On December 4, 2015, the Fixing America's Surface Transportation Act of 2015 ("FAST Act" or "Highway Funding Act") was signed into law replacing MAP-21. The most up-to-date guidance can be found at <https://www.transportation.gov/fastact>. (US DOT, Federal Highway Administration, Office of Federal Lands Highway, 2015)

The Corps of Engineers will work with County and Township Road Commissioners to seek improvements through available programs.

6.9. WATER SUPPLY STORAGE DEMANDS

Currently Lake Shelbyville has 177,795 acre-feet joint-use storage volume of which 24,714 acre-feet (13.9% of joint-use volume) can be utilized for water supply. Yield estimated is 17 million gallons per day (mgd) after 40 years of sedimentation.

Currently Carlyle Lake has 230,227 acre-feet joint-use storage volume of which 32,692 acre-feet (14.2% of joint-use volume) can be utilized for water supply. Yield estimated is 24.5 mgd after 40 years of sedimentation.

The following is a listing of existing State water supply contracts for Lake Shelbyville and Carlyle Lake:

TABLE 1
SHELBYVILLE AND CARLYLE WATER SUPPLY ALLOCATIONS

	Requesting Entity	Allocation Acre-Feet	Allocation MGD	Supplier	Withdrawal
Lake Shelbyville	Timber Lake Golf Course	50	0.04	Shelbyville	Lake
	Eagle Creek Resort	480	0.43	Shelbyville	Lake
	Holland Regional RWS	5,605	5.00	Shelbyville	River Release
	Holland Energy*	5,941	5.30	Shelbyville	River Release
	40 Year Sedimentation	5,661	5.05	Shelbyville	
Carlyle Lake	Governor's Run Golf Course	190	0.17	Carlyle	Lake
	Gateway PWS	4,484	4.00	Carlyle	River Release
	Dynegy Baldwin	16,086	14.35	Carlyle	River Release
	40 Year Sedimentation	5,224	4.66	Carlyle	
Combined Allocation	Prairie State	14,965	13.35	Shelbyville & Carlyle	River Releases
	Unallocated	-1280	-1.15	Shelbyville & Carlyle	
	Totals	57,406	51.2		

* Holland Energy allocated a maximum of 8 mgd, but expects annual average usage of 5.3 mgd

Considerations are being made in an effort to satisfy all the requests with a provision for potential time-line allocation reductions based on contract reductions in State storage due to sedimentation and increased needs of public water supply systems. The initial water supply needs of Holland Regional and Gateway will be much less than the quantity being requested since their systems needs are based on phased development of water treatment facilities and service area growth.

A draft report conducted by the Illinois State Water Survey of the projected water supply demand from the lakes during an extreme drought conditions has been conducted. The report shows that if the current demands and lake conditions were in place during the 1953-1955 drought of record, some water supply storage in both reservoirs would remain unused.

6.10. KASKASKIA RIVER WATERSHED

Due to its overall size and its importance within the region, a better understanding of the history of the watershed and its present condition is necessary. The Kaskaskia River Basin Feasibility Study is currently underway in order to develop future plans to maintain the vitality of the watershed.

The health of Lake Shelbyville is directly related to the health of the Kaskaskia River watershed. The water quality of the streams that feed into the upper Kaskaskia basin has an effect on the watershed. Issues of water quality, sediment control, and incorporating good conservation practices on lands adjacent to Corps of Engineers property are supported and encouraged in the effort to reduce impacts of sedimentation and poor water quality on Federal lands.

Kaskaskia Watershed Association (KWA)

There is a diversity of interests, stakeholders, and partners within the watershed that are dedicated to improving the natural resources, the economy, and the quality of life for all residents within the region. Issues do exist and must be addressed, but the residents of the watershed are looking to a healthy natural resource, positive economic benefits, and better quality of life. There is agreement that the watershed is important and that a better, healthier, and more prosperous resource will be good for all.

The Kaskaskia Watershed Association (KWA) was created to represent the entire watershed while recognizing the uniqueness and diversity within the river. They started meeting together in 1996 and incorporated and received their non-for-profit status in 2002, with equal representation from each group. Their goal is to develop, enhance, and protect the ecological and socio-ecological values of the natural resources within the Kaskaskia River Watershed. Eight different coalition groups within the watershed are working

together under the KWA umbrella to coordinate and invest resources to address watershed concerns, issues, and opportunities.

In combining the groups to form the KWA in a not-for-profit status from the headwaters of the Kaskaskia River at Champaign to the confluence of the Mississippi River, the stakeholders realize the watershed is very diverse but their goals are the same: communication, erosion, siltation, recreation, fish and wildlife, flood damage reduction, water supply, water quality, industrial, navigation, economic development, and ecosystems. Working together the coalition is able to combine resources of people, past investments, and existing economics and programs to further their goals and objectives in enhancing and preserving the watershed. Key organizations by river reach are as follows.

Reach I – Champaign to Lake Shelbyville Dam

- Lake Shelbyville Development Association (LSDA)
- Upper Kaskaskia C2000 Ecosystem Partnership

Reach II – Lake Shelbyville Dam to Carlyle Lake Dam

- Carlyle Lake Association (CLA)
- Mid Kaskaskia Coalition
- Carlyle Lake Watershed C2000 Ecosystem Partnership

Reach III – Carlyle Lake Dam to Fayetteville

- Okaw River Basin Coalition (ORBC)
- Original Kaskaskia Area Wilderness, Inc. (OKAW)
- Kaskaskia River/Shoal Creek C2000 Ecosystem Partnership

Reach IV – Fayetteville to Confluence of Mississippi River

- Lower Kaskaskia Stakeholders, Inc. (LKSI)
- Lower Kaskaskia/Silver Creek Ecosystem C2000 Partnership
- Sinkhole Plain C2000 Ecosystem Partnership

The existing base of natural resources in the Kaskaskia River Watershed is under pressure, but with proper planning and implementation, a restoration and protection project can yield good results with minimal public costs. Federal and state agencies, in collaboration with local interests, have worked together to develop local initiatives that will lead future protection and restoration efforts within the watershed.

The Kaskaskia River Watershed stakeholders are ready to move forward with planning, restoration, protection, improvement, and development efforts. They are committed to a holistic approach based upon the broad concerns within the watershed. Funding to pay for these projects will have to come from local sources with assistance from state and federal agencies and legislators. *(Southwestern, 2002)*

Upper Kaskaskia Ecosystem Partnership

The Upper Kaskaskia River Ecosystem Partnership evolved from an organized group of landowners representing the seven county Farm Bureaus and Soil and Water Conservation Districts in the watershed. Since 1995, the group has sought to promote nitrogen management, filter strips, no-till, and other best management practices.

The organization was designated as an Ecosystem Partnership of the Conservation 2000 Program in 1998 by the Illinois Department of Natural Resources' Office of Realty and Environmental Planning. This status has provided a mechanism, as well as funding, to bring interested stakeholders into a dialogue about the future of the watershed. The Partnership sponsored three public meetings in August of 1998 to identify resource concerns within the watershed and then appointed a Technical Advisory Committee to gather data regarding those concerns so that a plan could be developed to improve water quality, increase wildlife habitat, and address specific issues. This plan is updated periodically to meet current issues and is an appendix to Lake Shelbyville's OMP.

Goals of the Partnership.

The goals of the Upper Kaskaskia Ecosystem Partnership are to:

- Protect and enhance water quality in the Kaskaskia River Basin and Lake Shelbyville.
- Protect and enhance wildlife habitat in the Kaskaskia River Basin and Lake Shelbyville.

The Partnership is committed to pursuing these goals in ways that:

- Promote voluntary efforts of individual landowners and organizations.
- Maintain and improve the economy of the entire watershed.

6.11. BO WOOD LANDFILL

The St. Louis District performed a contamination evaluation of the former Harold Hays municipal landfill located in the Forrest W. "Bo" Wood Recreation Area at Lake Shelbyville, Illinois from 1989 - 1991. The landfill was in operation from 1904 until its closure as part of Lake Shelbyville Reservoir construction in 1968. At that time the seven-acre landfill was consolidated to its present location which covers about 2.6 acres. It is estimated that the landfill contains approximately 140,000 cubic yards of household, commercial, and industrial wastes. The lower portion of the clay-capped landfill is submerged under normal lake levels. This investigation was initiated when shoreline erosion threatened to expose areas of the former landfill.

This landfill is located just north of the picnic shelter in Bo Wood Recreation Area. Part of the Shoreline Erosion Management Plan work that has been completed included re-protecting this landfill.

The purpose of the study was to gather adequate background and field data to determine whether contamination of lake water, lake sediment, groundwater or site soils had occurred as a result of the landfill.

The results of the study indicate that although low levels of some contaminants are present in the groundwater and surface water at the site no contamination has been identified which could conclusively be attributed to the former landfill site.

In addition to the Bo Wood landfill site, other known community or private dumps existed in the reservoir area prior to the formation of Lake Shelbyville. These sites could be potential sources of lake water and ground water contamination.

6.12. GENERAL DACEY TRAIL

Walking and bicycling activities have become very popular. Trails are among the most popular and requested recreational amenity in any community and on all types of public land. (*Illinois Department of Natural Resources, 2015*) They represent some of the greatest users of public lands and facilities.

The General Dacey Trail Plan is a multi-partner regional initiative centered on Lake Shelbyville. Upon completion, the General Dacey Trail will provide almost 170 miles of recreational opportunities for bikers, hikers, skaters, and cross-country skiers. Providing an off-road link to Lake Shelbyville and the other nearby communities, the trail network promises to increase tourism and to spur trail-use related economic development. This project is being developed in phases as a Challenge Partnership Agreement. Several phases will be needed to construct the trail network through programs and authorities of numerous organizations and agencies. As organizations and agencies undertake respective trail development phases, they will use the trail master plan as the guiding document.

The project initially included both newly constructed and existing trails located on Corps of Engineers' property, as well as designating existing roadways in the lake area. Additional miles of trail from Sullivan to Camp Camfield and within the City of Shelbyville have been added. Whenever possible, it is recommended that additional right-of-way along roadways be acquired and a separate trail surface be constructed by non-federal partners. The General Dacey Trail Concept Plan can be found on Plate 37.

6.13. SHORELINE EROSION

Shoreline erosion at Lake Shelbyville is caused by a combination of factors: fluctuating lake level, waves created by wind and boat actions, and the soil surrounding Lake

Shelbyville being predominately glacial sandy clay with little resistance to erosion. Some methods used to reduce or eliminate erosion problems project-wide include promoting woody and herbaceous vegetative growth, manipulation of water run-off, identifying and monitoring erosion problems on and adjacent to public lands, waters and lakeshore. In other cases, facilities required more immediate corrective action.

Currently, one area of immediate concern is the shoreline southeast of Bo Wood Recreation Area as it may be necessary to acquire additional land in Sections 23 and 26 of T13NR5E, Moultrie County, Illinois. The shoreline has eroded to within 100 feet of the fee boundary in some locations. Three privately owned homes bordering government lands could eventually be affected as well.

The Final Letter Report, Lake Shelbyville Shoreline Erosion Management Plan, 29 January 1993, recommended facilities needing protection, consolidation, removal, or replacement because of predicted shoreline erosion over the next 30 years (baseline 1990). Much of the work has been completed. Erosion limits in some recreation areas based on the 1993 plan are shown on Plates 17, 18 and 20. Other plates will be revised with shoreline erosion limits as a Master Plan supplement at a later date. The plan is reviewed periodically to ensure efficiency and economy as issues with shoreline erosion will continue. Since the Shoreline Erosion Plan was implemented more than 20 years ago, it may be time to revisit and reevaluate the plan, outlining corrective action for the future.